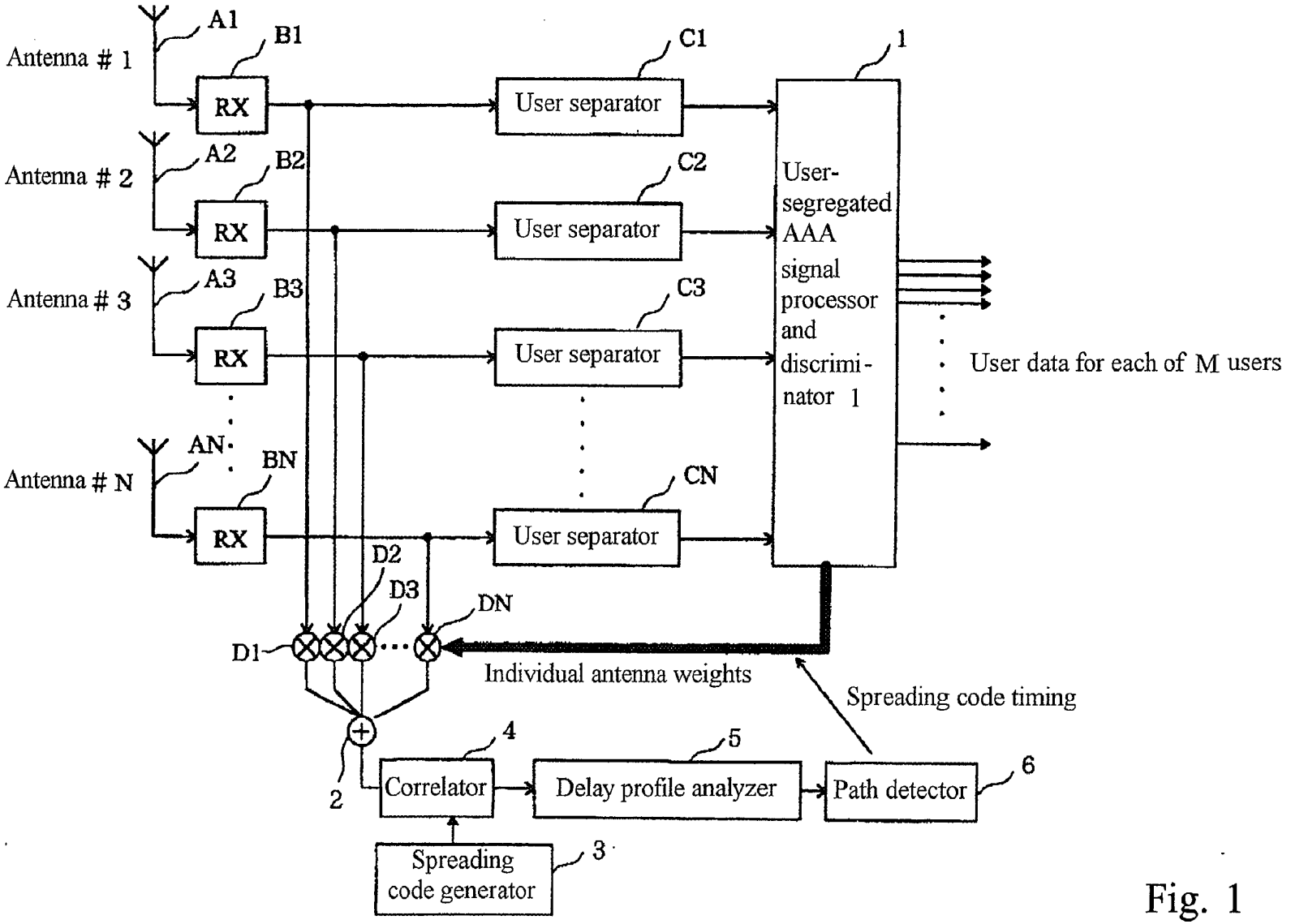
Antenna # 1
A1
B1
RX
User separator
C1
1
Antenna # 2
A2
B2
RX
User separator
C2
User-segregated AAA signal processor and discrimi-nator 1
Antenna # 3
A3
B3
RX
User separator
C3
User data for each of M users
Antenna # N
AN
BN
RX
User separator
CN
D2
D3
DN
D1
Individual antenna weights
Spreading code timing
2
4
Correlator
5
Delay profile analyzer
Path detector
6
Spreading code generator
3

Fig. 1

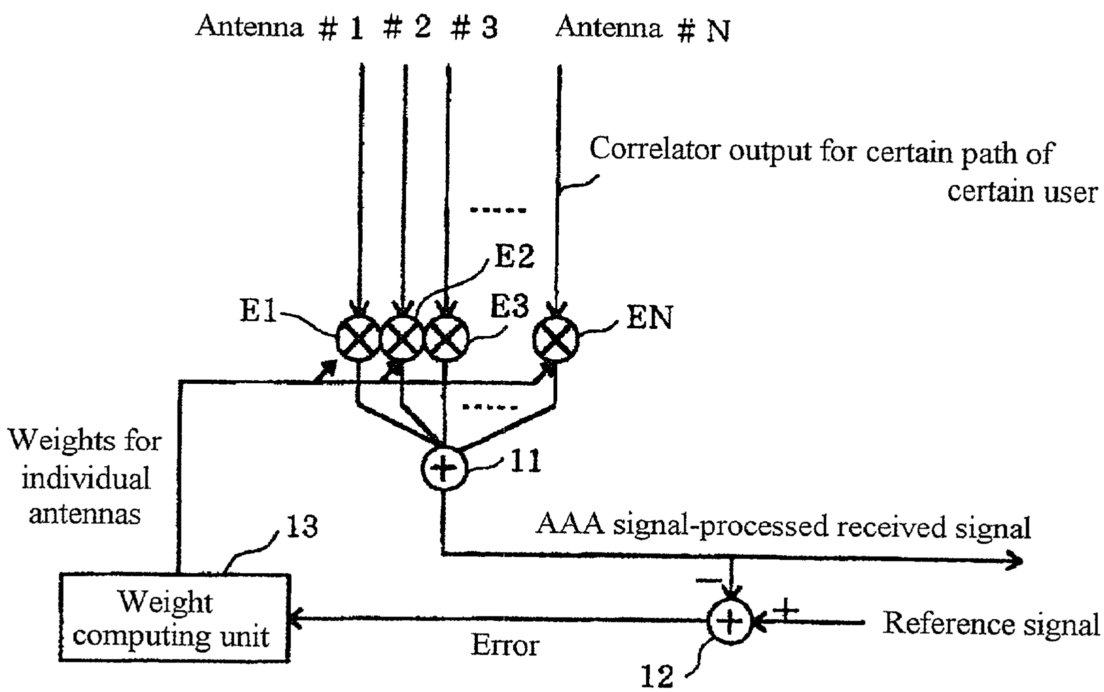

Fig. 2

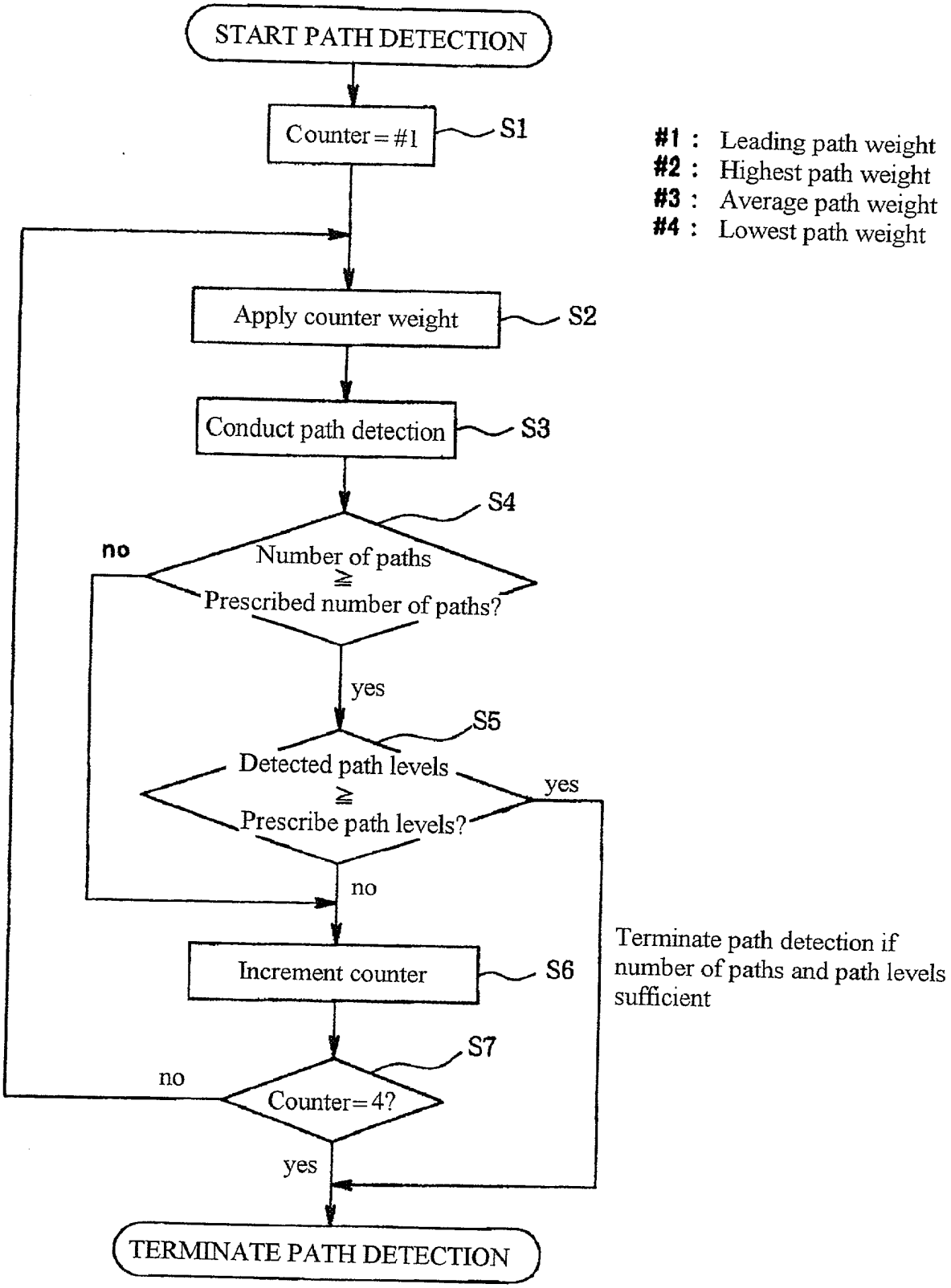
START PATH DETECTION
Counter = #1
S1
Apply counter weight
S2
Conduct path detection
S3
S4
Number of paths ≧ Prescribed number of paths?
no
yes
S5
Detected path levels ≧ Prescribe path levels?
yes
no
Increment counter
S6
S7
Counter=4?
no
yes
TERMINATE PATH DETECTION
#1 : Leading path weight
#2 : Highest path weight
#3 : Average path weight
#4 : Lowest path weight
Terminate path detection if number of paths and path levels sufficient

Fig. 3

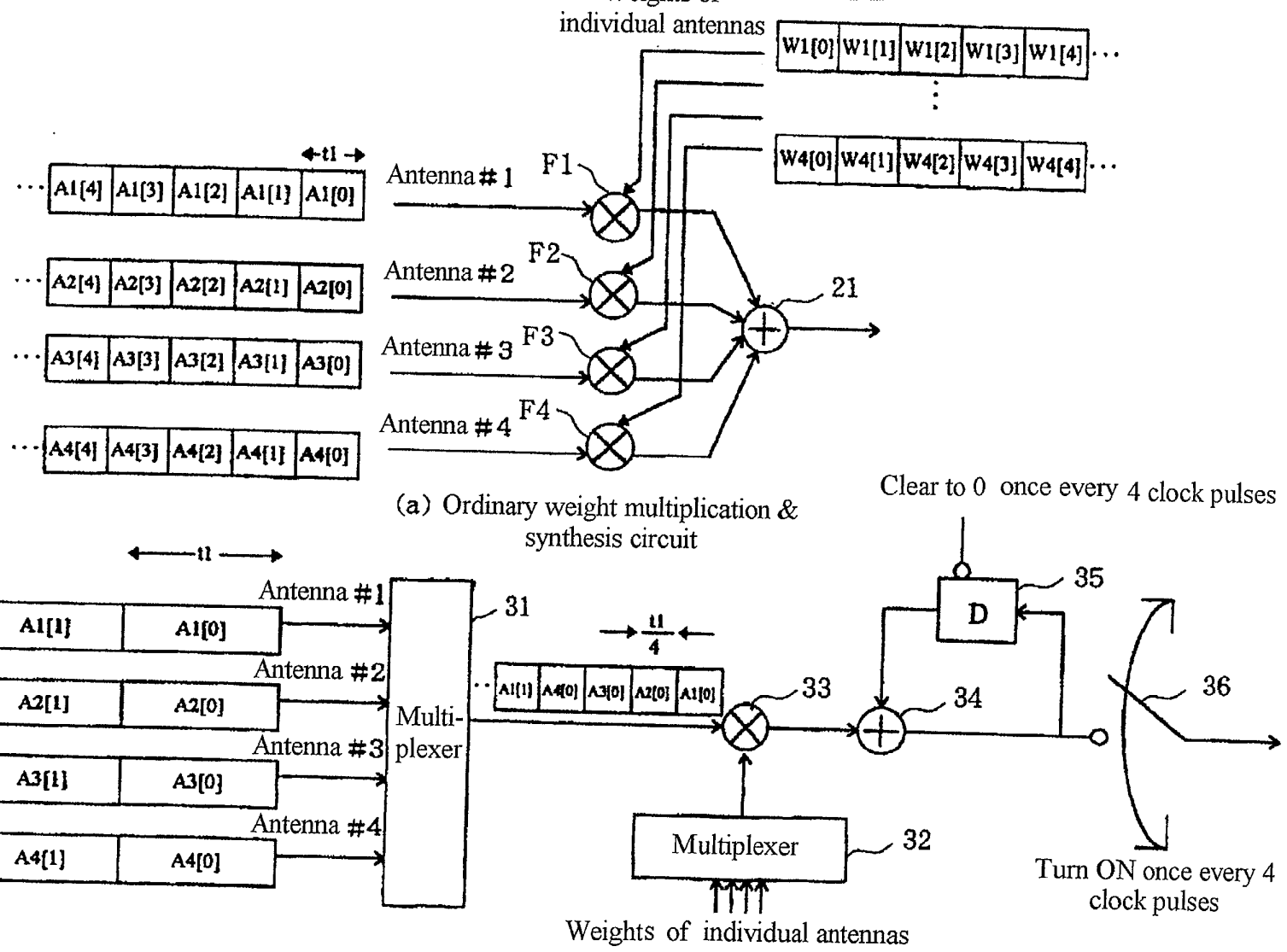

Fig. 4

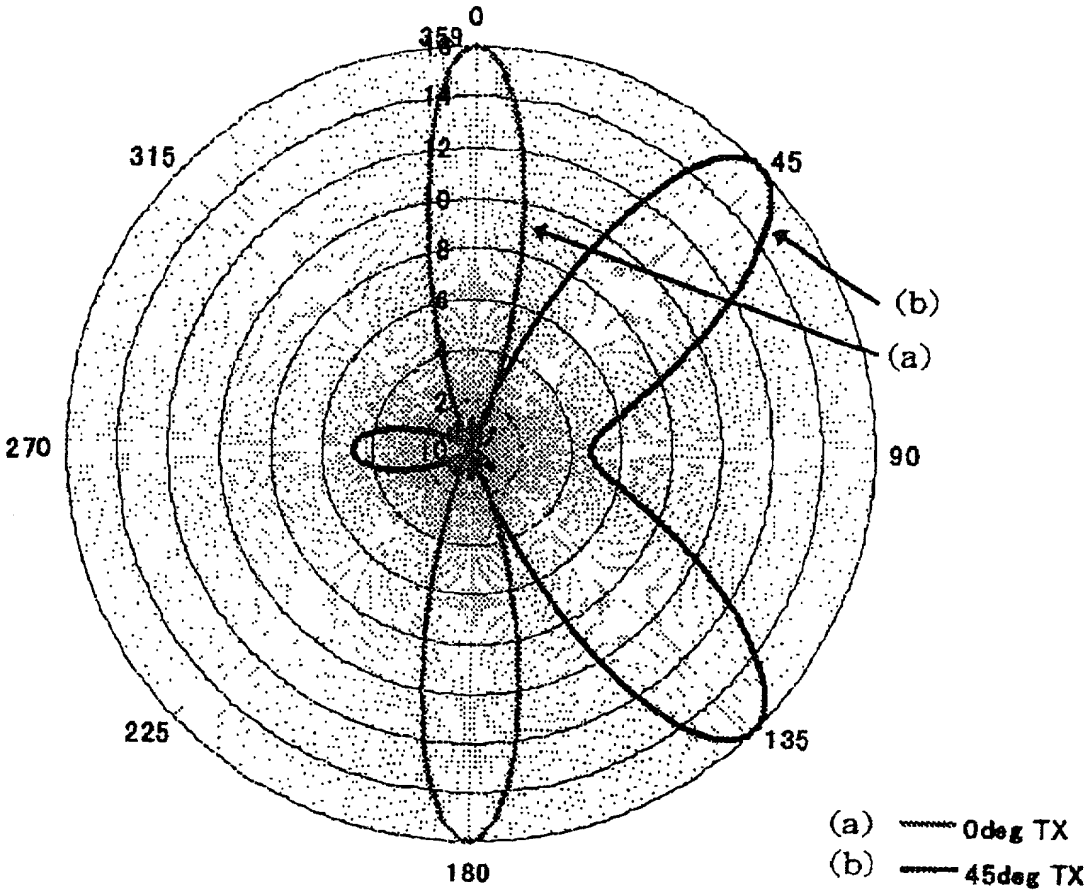

Fig. 5

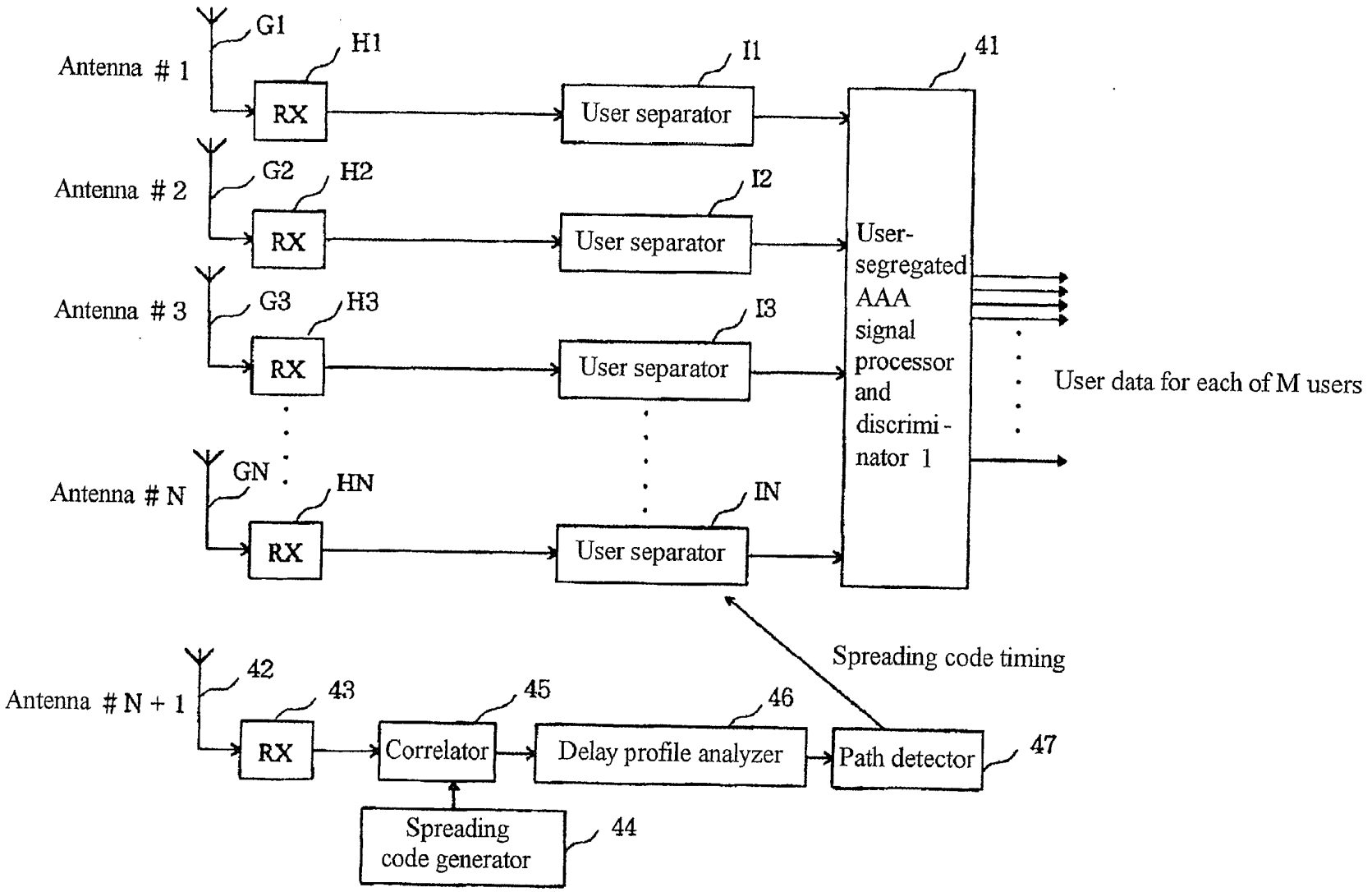
Antenna # 1
G1
H1
RX
User separator
I1
41
Antenna # 2
G2
H2
RX
User separator
I2
User-segregated AAA signal processor and discrimi-nator 1
Antenna # 3
G3
H3
RX
User separator
I3
User data for each of M users
Antenna # N
GN
HN
RX
User separator
IN
Spreading code timing
Antenna # N + 1
42
43
RX
45
Correlator
46
Delay profile analyzer
Path detector
47
Spreading code generator
44

Fig. 6

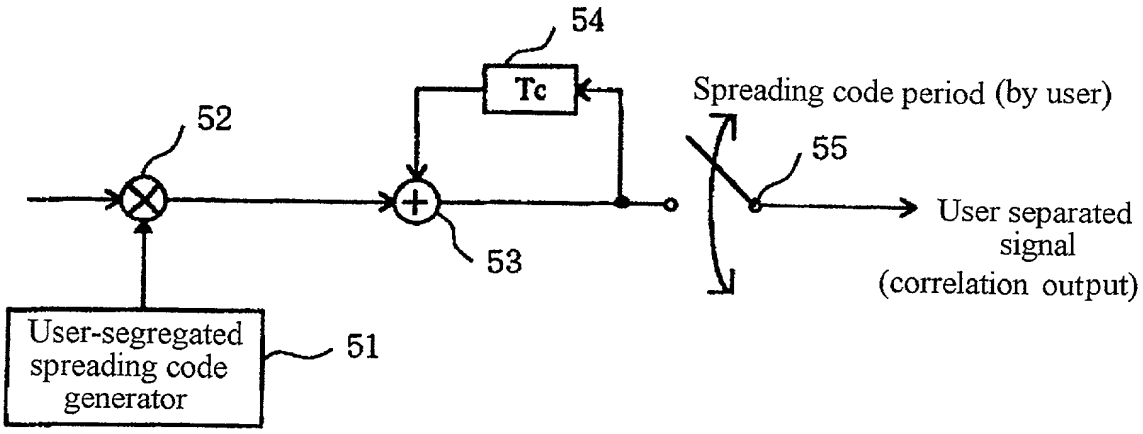
54
Tc
Spreading code period (by user)
52
55
User separated
signal
(correlation output)
53
User-segregated
spreading code
generator
51

Fig. 7

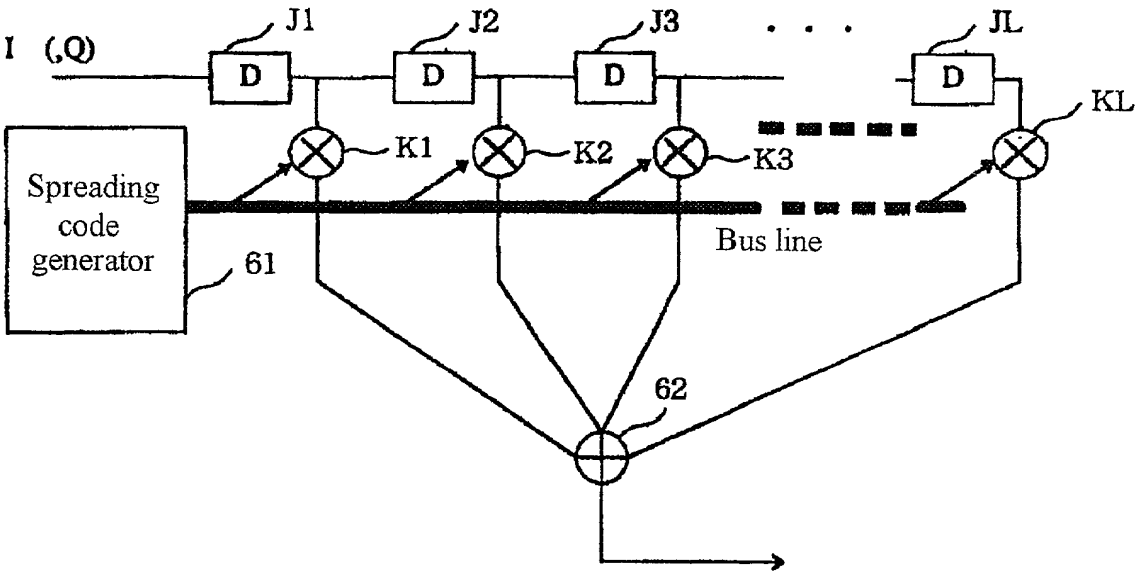
I (,Q)
J1
J2
J3
JL
D
D
D
D
KL
K1
K2
K3
Spreading code generator
61
Bus line
62

Fig. 8

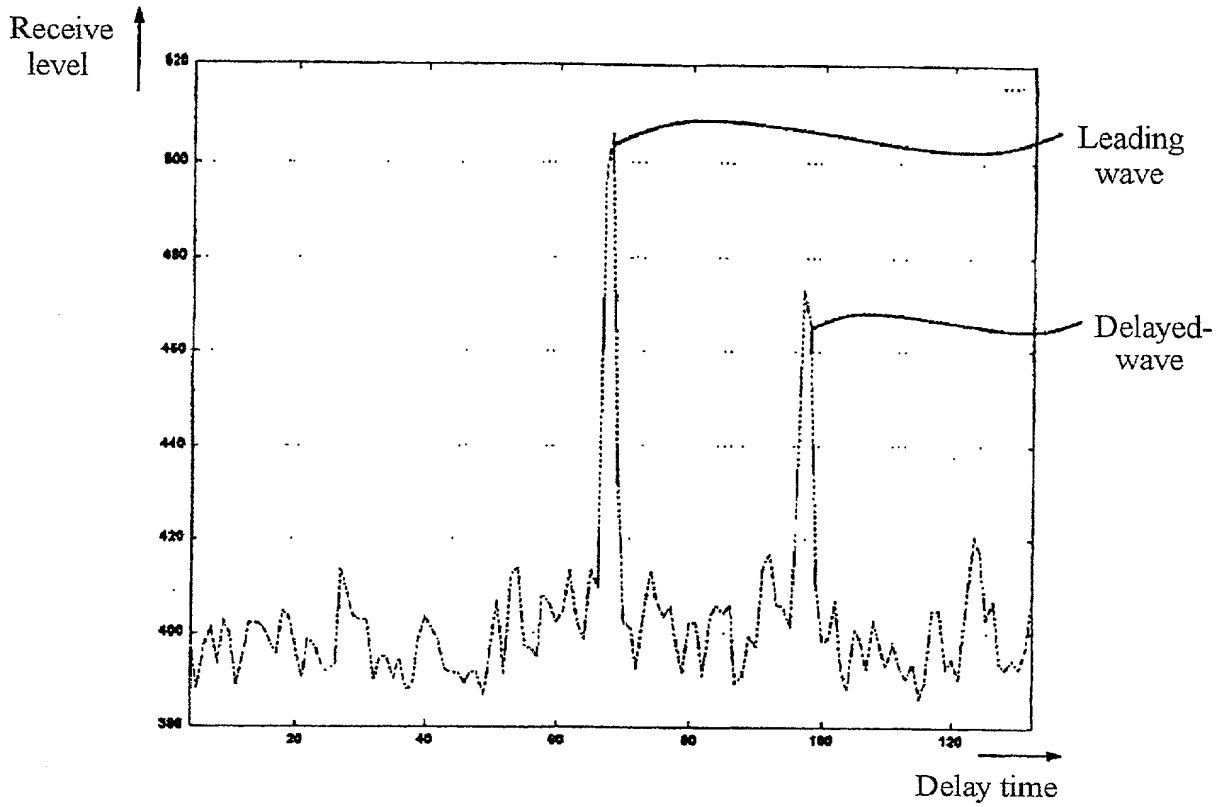

Fig. 9

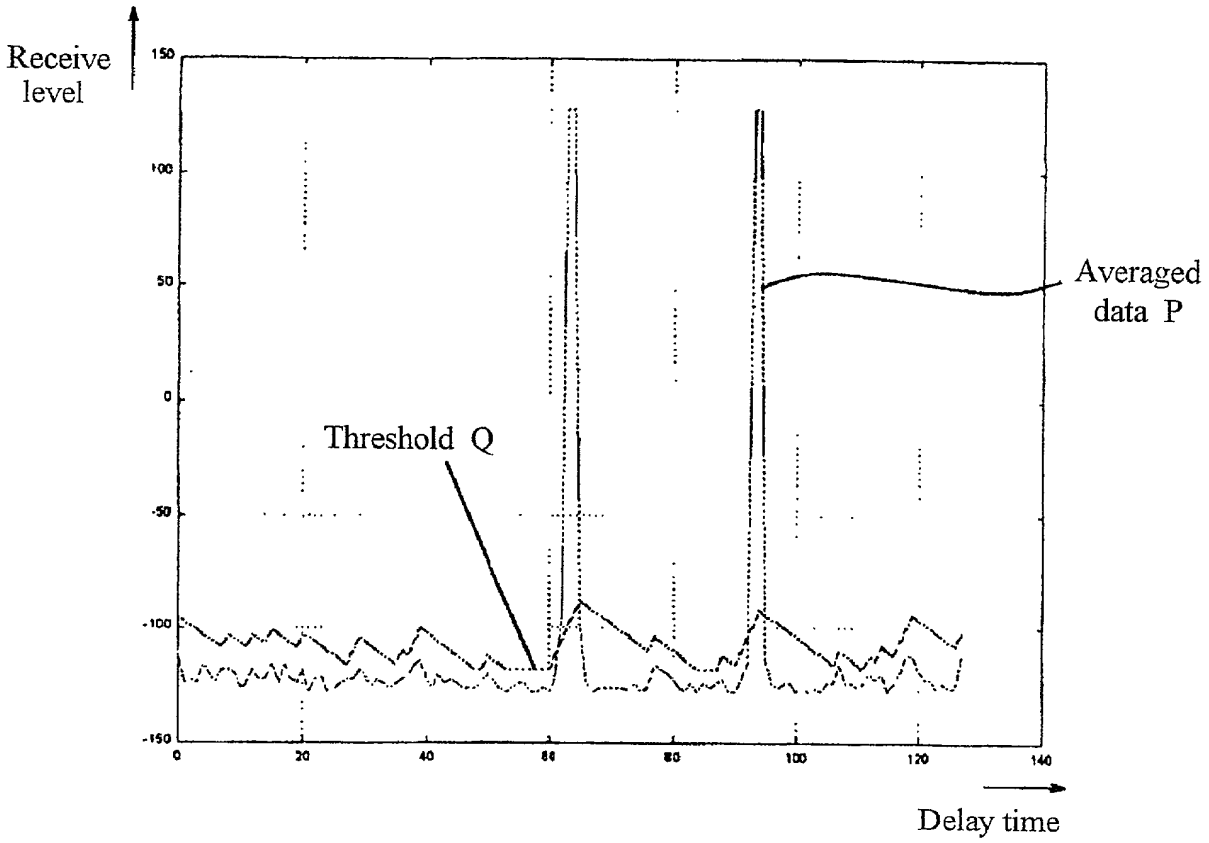
Receive level
150
100
50
0
-50
-100
-150
0
20
40
60
80
100
120
140
Threshold Q
Averaged data P
Delay time

Fig. 10